## Sciences Standards Science on Saturday

Lawrence Livermore National Laboratory March 10, 2007

## Comets and the Stardust Mission: What's in our Solar System's Freezer?

## **Presenters:**

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## **Science Content Standards covered in this presentation:**

Grades Nine Through Twelve, Earth Sciences, Earth's Place in the Universe

- 1. Astronomy and planetary exploration reveal the solar system's structure, scale, and change over time. As a basis for understanding this concept:
  - a. *Students know* how the differences and similarities among the sun, the terrestrial planets, and the gas planets may have been established during the formation of the solar system.
  - b. *Students know* the evidence from Earth and moon rocks indicates that the solar system was formed from a nebular cloud of dust and gas approximately 4.6 billion years ago.
  - c. *Students know* the evidence from geological studies of Earth and other planets suggest that the early Earth was very different from Earth today.
  - f. Students know the evidence for the dramatic effects that asteroid impacts have had in shaping the surface of planets and their moons and in mass extinctions of life on Earth.